

ABSTRACT

A seal for use with a knife gate valve is disclosed, the seal having a loop to which is attached an axially facing sealing lobe. A sealing surface is positioned on the sealing lobe, the sealing surface having an axially projecting leading edge and flanking annular sealing surfaces oriented angularly. Axial and inner channels extend around the loop and provide space for the loop to deform when the sealing lobe is compressed. A reinforcing band is encapsulated within the loop to stiffen it against buckling when compressed by forces acting across the leading edge. The seal is used in facing pairs with the sealing lobes being compressed against one another to form a radial seal when the valve is open. The seal is made from a flexible, resilient elastomeric compound; the band is metal.